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10/646,575

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Winnie C. Wu

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EXAMINER

ABEL JALIL, NEVEEN

ART UNIT

PAPER NUMBER

2165

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/646,575	<b>Applicant(s)</b> WU ET AL.	
	<b>Examiner</b> Neveen Abel-Jalil	<b>Art Unit</b> 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on April 9, 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/5/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### Remarks

1. The Amendment filed on April 9 -2008 has been received and entered. Claims 17-36 are pending.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 17-27, and 29-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar et al. (U.S. Patent No. 6,343,287 B1).

As to claim 17, Kumar et al. discloses a method for querying and returning instances of items comprising:

receiving from an application that operates in user space of an operating system (a browser is an application in the user space of an operating system), a request identifying an item stored in a database management program integrated with a file system of the operating system (a request is a user command received from a user application), said item having a scope that includes at least one additional item (Wherein a query such as SQL inherently has a scope, See

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Abstract, wherein “scope” reads on “what’s covered in the database”), wherein the operating system is configured to store, while in kernel mode, data in the file system as file streams, and generate, while in kernel mode, items associated with the file streams in the database management program (where it is inherent in any computer machine that kernel mode takes over user commands to access the underlying layer for execution, wherein “file streams” are known to be “file format” that are stored in the database, and wherein “generating” simply means “what is being passed back as results to the user”);

generating, by the database management program integrated with the file system (wherein it is inherent that databases are managed at the application level with their own management program), an object that encapsulates an instance of the identified item (See column 16, lines 30-40), the encapsulation providing a method for querying the database management program (See column 14, lines 58-65, wherein “object” includes methods to query the data store, and see column 16, lines 8-30);

executing, by the database management program integrated with the file system, a query on said object for at least one additional item, the query utilizing the scope of the identified item as a parameter (See column 16, lines 8-30, wherein “additional item” reads on “one or more items”); and

returning to the application at least one instance of the at least one additional item that matches the query (See column 5, lines 24-32, and see column 10, lines 5-10, wherein “query” is a “client request”).

As to claim 18, Kumar et al. discloses comprising:

interfacing with the database management program, each item associated with at least one schema that defines an item's type (See column 18, lines 19-30); and

generating at least one data class for each item stored in said database, wherein the fields of the item's type map to the fields of the at least one data class (See column 19, lines 1-21).

As to claim 19, Kumar et al. discloses wherein the at least one schema that defines an item's type is received from a third party (See column 17, lines 24-29, and see column 18, 19-30).

As to claim 20, Kumar et al. discloses wherein generating an instance of said identified item further comprises:

generating an instance of the identified item from at least one data class, wherein the generated instance includes methods specific to the data class (See Abstract, and see column 23, lines 1-14).

As to claim 21, Kumar et al. discloses wherein said object utilizes a connection to the database management program to query the database management program and modify the items stored in said database management program (See column 20, lines 40-52).

As to claim 22, Kumar et al. discloses wherein the query further specifies *at least one of* an item's property, an item's extensions, and an item's relationships as a query parameter (See column 21, lines 35-54).

As to claim 23, Kumar et al. discloses further comprising:  
receiving an indication that said application has modified the *at least one* instance of the  
at least one additional item (See column 6, lines 14-20, and see column 24, lines 41-57).

As to claim 24, Kumar et al. discloses wherein the object utilizes a method for saving  
changes to save the modifications to the at least one item stored in said database management  
program integrated with the file system (See column 20, lines 40-41, wherein it is inherent that  
API access the underlying storage using a program).

As to claim 25, Kumar et al. discloses wherein the scope of said identified item includes a  
plurality of items stored in a plurality of database management program integrated with a  
plurality of file systems (See column 16, lines 48-51).

As to claim 26, Kumar et al. discloses wherein the object establishes a connection with  
the plurality of database management program integrated with a plurality of file systems to query  
for the at least one additional item (See column 20, lines 12-32).

As to claim 27, Kumar et al. discloses wherein the object establishes an individual  
connection with a specific database management program integrated with a plurality of file  
systems in the plurality of database management program integrated with a plurality of file  
systems to save changes to a specific item stored in said specific database management program

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integrated with a specific file system (See column 9, lines 22-25, wherein “access” operation can include “write” or “update” which are all changes).

As to claim 29, Kumar et al. discloses further comprising:

maintaining a cache of the at least one instance of the at least one additional item that matches the query, wherein subsequent queries are performed against the cache (See column 22, lines 40-52).

As to claim 30, Kumar et al. discloses further comprising:

receiving an indication that an application has modified the at least one instance of the at least one additional item (See column 13, lines 2-35, wherein “an indication” reads on “notification”); and

utilizing a method to save changes to the at least one instance of the at least one additional item in said cache (See column 22, lines 40-52, all changes are kept in the registry).

As to claim 31, Kumar et al. discloses wherein said identified item is a set of items that includes one of an entire set of items in the database management program, any subset of items in said database management program, and any individual item in said database management program (See column 16, lines 48-51).

As to claim 32, Kumar et al. discloses wherein the identified is an item of a type folder, the scope of the item of the type folder includes any items that are contained within the item of

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the type folder (See column 15, lines 31-44, wherein “type folder” reads on “profiles of the same kind stored in a list”).

As to claim 33, Kumar et al. discloses wherein each item stored in said database management program includes a relationship to another item stored in said database management program, said relationship defined by a property in an item that is a source of the relationship and a property in an item that is the target of the relationship (See column 22, lines 1-14, wherein “profile” is dedicated to one specific data store type).

As to claim 34, Kumar et al. discloses wherein a query that includes an item's relationships as a parameter returns an instance of any item that is the source a relationship and an instance of any item that is the target of a relationship (See Figures 7A-7D, shows type of relationships within a class or among classes used to return instance of any item).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (U.S. Patent No. 6,343,287 B1) in view of Plutowski (U.S. Patent No. 6,473,851)-previously cited.



As to claim 28, Kumar et al. does not teach wherein the object includes a conflict handler method that is configured to detect when multiple applications modify instances of the same item and determine what modifications to save by utilizing a policy.

Plutowski teaches wherein the object includes a conflict handler method that is configured to detect when multiple applications modify instances of the same item and determine what modifications to save by utilizing a policy (See column 20, lines 5-21, teaches database access, and see column 24, lines 35-44, teaches conflict resolution detection).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Kumar et al. with Plutowski to include wherein the object includes a conflict handler method that is configured to detect when multiple applications modify instances of the same item and determine what modifications to save by utilizing a policy to assure efficient access and persistent data storage in the database (See Plutowski column 2, lines 35-39).

6. Claims 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (U.S. Patent No. 6,343,287 B1) in view of C. Liebig et al. A Publish/Subscribe CORBA Persistent State Service Prototype. Middleware 2000: IFIP/ACM International Conference on Distributed Systems Platforms, New York, NY, USA, April 2000. Proceedings (From here on in Liebig et al.).

As to claim 35, Kumar et al. discloses the claimed invention but does not explicitly teaches receiving a request from an application to track changes to one of an item, an item's extensions, and an item's relationships; registering, the database management program integrated with the file system, said application for a notification service that notifies said application when any changes to one of the item, the item's extensions, and the item's relationships are detected.

Liebig et al. teaches receiving a request from an application to track changes to one of an item, an item's extensions, and an item's relationships (See page 233, lines 1-3, and see page 242, section 4.1.3);

registering, the database management program integrated with the file system, said application (See page 235, section 2.2, and page 237, lines 1-8, wherein “registering” reads on “publish/subscribe” architecture) for a notification service that notifies said application when any changes to one of the item, the item's extensions, and the item's relationships are detected (See page 238, wherein various types of “notification” are sent to the applications).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Kumar et al. with Liebig et al. to include receiving a request from an application to track changes to one of an item, an item's extensions, and an item's relationships; registering, the database management program integrated with the file system, said application for a notification service that notifies said application when any changes to one of the item, the item's extensions, and the item's relationships are detected because it provides a way to efficiently propagate and manage updates in distributed heterogeneous network (See Liebig et al. abstract).

As to claim 36, Kumar et al. as modified discloses wherein said notification service notifies said application when any changes to items associated with the item, the item's extensions, and the item's relationships are detected (See Liebig et al. page 238, wherein various types of “notification” are sent to the applications).

### ***Response to Arguments***

3. Applicant's arguments filed on April 9, 2008 have been fully considered but they are not persuasive.

Generally viewed, Applicant's new amendments as well as the arguments appear to be directed to basic operations of any computer or computing device, just as attested in supporting portions of Applicant's specification, where all definitions and statements are with respect to standard and accepted descriptions of a computer system and its functionality.

For example, an operating system (OS) is defined on google.com as: A software intermediary that facilitates collaboration between hardware and software on a given computer. Operating Systems often are designed with a friendly user interface that makes the computer easier to use.

Kernel mode, also referred to as *system mode*, is one of the two distinct modes of operation of the CPU, The kernel-mode programs run in the background, making sure everything runs smoothly - things like printer drivers, display drivers, drivers that interface with the monitor, keyboard, mouse, etc.

As it is well known in the computing software art all processes begin execution in user mode, and they switch to kernel mode only when obtaining a service provided by the kernel. Therefore, it is unclear how separating the claimed limitation in the manner amended is any different from conventional operating mode.

A database management system is inherent of all databases since it is the application that manages and runs the database. The database is nothing more than a storage space, managed and manipulated by the management system that controls it.

As asserted by Applicant's remarks and supported by Applicant's specification (paragraph 0065, 0068, and 0426), the definitions of operating system, kernel mode, user applications, etc. are all generic to existing computer systems and specifically to operating systems such as Windows™. Even so, Kumar teaches the use of operating systems to access his user application in column 3, lines 40-47, as well as the use of database management program in column 12, lines 12-18 (i.e. API to access the underlying physical storage)

In other words, it is unclear how those additions distinguishes the claims from the cited prior art or any existing computer for that matter.

Applicant's argument on page 6 of the remarks that Kumar fails to teach an item that has a scope, the scope including at least one additional item...and Kumar fails to teach using the scope of an item as a parameter in a query" is respectfully noted but not deemed to be persuasive.

The Examiner fails to understand how any document query string esp. in SQL query language such as the one defined by Kumar fails to teach a scope since unless there is a specific and special meaning to Applicant's "scope" then it is taken to be what is inherently prevalent and

well known in the art to be determined by the object to which you bind. It is also well known and inherent in the database query art that a query scope itself may contain other query scopes or simply queries. Kumar 's parameter definition (column 16, lines 8-30) and later call to bind is the query scope for his example given (column 15, lines 30-40).

Applicant's argument regarding "specifying query characteristic" found on page 6 of the remarks is not found to be persuasive since the language of the claim is broad and abstract and can be taken to cover various generic aspects of database characteristics including query characteristics.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bauer (U.S. Patent No. 5,388,257) teaches operating computer based file using direct commands to retrieve files.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 571-272-4074. The examiner can normally be reached on 8:30AM-5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian P. Chace can be reached on 571-272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neveen Abel-Jalil  
Primary Examiner  
July 6, 2008

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Primary Examiner, Art Unit 2165